Amendments to the Specification

Please replace the paragraph at page 2, lines 3 to 13, with the following amended paragraph:

The system also comprises a base station that further includes a means for receiving the weather parameter signal from the monitoring station. This receiving means provides the weather parameter signal to the rest of the base station. Means, coupled to receive the weather parameter signal from the receiving means, are provided for generating an icon signal representing a weather parameter icon in response to the weather parameter signal. The weather parameter icon represents the weather parameter sensed at the first geographic location. Means are provided for receiving an input television signal representing the television broadcast related to the first geographic location. These receiving means provide the input television signal to the base station. Finally, means are provided for merging the input television signal with the icon signal, with the merging means producing an output television signal representing the weather parameter icon superimposed on the input television signal.

A1 cancel

Please replace the paragraphs at page 4, lines 1 to 20, with the following amended paragraphs:

Fig. 2 is a block diagram of the monitoring station 14 as shown in Fig. 1. The monitoring station 14 includes a means 22 for sensing or sampling a given weather parameter 12 and for generating a weather parameter signal corresponding to the sampled weather parameter. The monitoring station 14 also includes a means 24 for transmitting the weather parameter signal from the monitoring station 14. Typically, this transmitting means 24 transforms the signal as necessary to make it suitable for transmission over distances. However, the specific means chosen for the transmitting means 24 will depend on the choice of transmission medium chosen to link the base station 16 with the one or more monitoring stations 14 [[16]].

A2 cont'd

In an illustrative embodiment of the invention, a communications network 28 serves as the link 26 shown in Fig. 1, and couples the transmitting means 24 of the monitoring station with the base station 16. The communications network 28 can be a cellular communications network, in which case the transmitting means 24 would be a suitable cellular modem. Alternatively, the communications network 28 can be another wireless embodiment such as a UHF radio or other RF communications network, in which case the transmitting means 24 would be a modem suitable for interfacing the monitoring station 14 with such network 28. However, if the monitoring station 14 is sufficiently close to the base station 16, or if the monitoring station 14 is intended to maintain a permanent geographic position relative to the base station 16, then it can be direct-wired via link 26 to the base

A2 cancl

station 16, as illustrated in Fig. 1. In this [[the]] case, communications network 28 would include all the conductors and connectors necessary to place the base station 16 and the monitoring station 14 in communication.

Please replace the paragraphs at page 5, lines 1 to 19, with the following amended paragraphs:

A3 cont'd

Fig. 3 is a more detailed block diagram of the monitoring station 14 constructed in accordance with an illustrative embodiment of the invention shown in Fig. 2. In an illustrative embodiment of the invention, the monitoring station 14 includes a microcontroller 30, such as an 80C552-based microcontroller as available from Tecel Company in Albuquerque, NM ~~(www.tecel.com)~~. Microcontroller 30 is coupled to receive the weather parameter signal 12 from the sampling means 22, and the transmitting means 24 includes a modem 32 coupled to the microcontroller 30 to transmit the weather parameter signal 12 from the monitoring station. The microcontroller 30 can be adapted to provide a user interface (not shown) to the monitoring station 14 to allow the user to adjust the operating parameters of the monitoring station 14 as necessary (sampling intervals, etc.).

Fig. 4 is a block diagram of a base station [[unit]] 16 constructed in accordance with an illustrative embodiment of the invention as shown in Fig. 1. The base station 16 includes a

means 34 for receiving the weather parameter signal 12 from the monitoring station 14 via communications network 28 and providing the weather parameter signal 12 to the rest of the base station 16. Typically, this receiving means 34 transforms the received signal as necessary from its transmission format to make it suitable for processing by the rest of the base station 16. However, as above, the specific means chosen for the receiving means 34 will depend on the choice of communication network 28 chosen to link the base station 16 with the one or more monitoring stations 14.

A3 cancl.

Please replace the paragraph connecting line 27 of page 5 and line 2 of page 6, with the following amended paragraph:

Means 50 are provided for converting the icon signal from the generating means 36 into a television signal representing the weather parameter 12. The television signal output from converting means 50 is in a format suitable for integration into the television broadcast 20 as ultimately produced and broadcast to the viewer. Converting means 50 is discussed in more detail in connection with Fig. 9 below.

A4 cancl.

Please replace the paragraph connecting line 28 of page 6 and line 7 of page 7, with the following amended paragraph:

Returning to Fig. 4, production switcher 19 receives an

A5 cont'd

input television signal 18 representing the television broadcast related to a first geographic location monitored by a first one of the monitoring stations 14. As known in the art, this input television signal 18 is typically captured by a television camera or other suitable camera positioned proximate the first geographic location. Production ~~production~~ switcher 19 merges the input television signal 18 with the output signals representing the weather parameter icon(s) from the generating means 36. The production switcher 19 produces an output television signal 20 representing the weather parameter icon superimposed on the input television signal 18, resulting in a television broadcast 20 related to the first geographic location with the weather parameter icon appearing on the broadcast as perceived by the viewer.

A5 cont.

Please replace the paragraph connecting line 19 of page 8 and line 5 of page 9, with the following amended paragraph:

Fig. 8 is a block diagram of the various software components residing on the microcontroller 30 of Fig. 3. The microcontroller 30 provides Instrument Interface Interrupt Logic 92 for servicing interrupts generated by the instruments provided as sampling means 22, such as wind vanes and anemometers. The software running on microcontroller 30 also provides appropriate Interrupt Service Routines (ISRs) to configure the sampling means 22 and to retrieve sampled data from sampling means 22, as

A6 cont'd

recognized and understood by those skilled in the art. Operator Ready Switch Logic ~~ready switch logic~~ 94 allows the user to configure and program the microcontroller 30, such as to enter sampling parameters. Sample data block 96 serves to receive, store, buffer, and transmit data sampled by the sampling means 22, and is responsive to the programming entered by the user through the Operator Ready Switch Logic ~~ready switch logic~~ 94. The Serial Communications Protocol Interrupt Logic 98 functions to coordinate and execute the serial communication of the sampled data from the microcontroller 30 to the base station 16. Specifically, Serial Communications Protocol Interrupt Logic 98 services all interrupts involved with the serial communication between the microcontroller 30 and the base station 16. A radio modem embodiment 32 of transmitting means 24 is coupled to the microcontroller 30 to communicate serially with the base station 16. A suitable radio modem 32 is the TS4000 by Teledesign Systems ~~(www.teledesignsystems.com)~~. However, those skilled in the art will recognize that other radio modems are available and may be appropriate in certain applications.

A6 canel.

Please replace the paragraphs connecting line 3 of page 10 and line 7 of page 11, with the following amended paragraphs:

A7 contd

The Graphics Presentation/Continuous Update Logic 89 receives data signals from the Remote Sample Data areas 86a, 86b, and 86c, and receives control signals from the operator interface

subsection 87. After selecting a monitoring station 14 and setting the graphic parameters as described above, the user activates an "execute" or similar button to cause the Graphics Presentation/Continuous Update Logic [[logic]] 89 to combine the operator input with the sampled data from the selected monitoring station 14. The Graphics Presentation portion of the logic then generates a display of the resulting graphic. The Continuous Update portion of the logic generates control signals 81 to the Multi-Point Serial Communications Protocol logic 82 to re-sample or refresh the data sampled from the monitoring station 14 as necessary to provide the viewer with an up-to-the-minute display of weather or wind conditions, in near-real-time. The Graphics Presentation/Continuous Update Logic 89 provides output data signals 83a to a converting means 50, such as a graphic frame buffer card, and generates control signals 83b to the converting means 50, in addition to the control signals 81 [[and]] to the Multi-Point Serial Communications Protocol logic 82.

A7 cont'd

The test patterns module 88 is responsive to control signals from the operator interface block [[bock]] 85 to generate test signals that are passed as control signals to the Graphics Presentation/Continuous Update Logic 89. Such test signals can be useful for debugging or diagnosing problems with the system 10, as recognized by those skilled in the art.

The graphic frame buffer card, serving as converting means 50, receives both data and control signals from the Graphics Presentation/Continuous Update Logic 89 [[82]]. A

suitable card and driver software are available from Matrox, Inc., ~~(www.matrox.com),~~ such as their "DigiMix" model, ~~featured at http://www.videotexsystems.com/MatroxDigiMix.htm.~~ However, other graphics cards may be available and may be suitable in certain applications.

In an illustrative embodiment of the invention, an additional drawing/captioning language layer 81 resides between the software on the base station 16 and the graphics card 50 that enables the software to specify abstract graphics parameters rather than requiring the software to manipulate pixels directly to effect the desired graphics. For example, using such a drawing/captioning language layer 81 would enable the software to specify "put '2.5 MPH' in the 'Banker' font with anti-aliasing at coordinate (85,421)" instead of having to [[do]] perform pixel by pixel manipulations. Suitable drawing/captioning software 81 is the RTX product available from Inscriber Technologies, ~~(www.inscriber.com).~~ RTX provides a type of character generator utility that interprets a drawing/captioning command language into pixels on a memory bitmap. However, other similar software packages may be available and may be suitable in certain applications to implement drawing/captioning language layer 81. In certain applications, it may be desirable to forego implementation of drawing/captioning language layer 81 in favor of direct pixel manipulation.

A7 cancel.

Please replace the paragraphs connecting line 18 of

page 11 and line 22 of page 12, with the following amended paragraphs:

Fig. 7 is a flowchart diagram of an illustrative method of operation employed by the invention. The invention provides a method for integrating data representing a wind direction and a wind speed prevailing at at least a first geographic location into a television broadcast related to the first geographic location. In an illustrative embodiment of the invention, the method comprises the following steps. The wind direction and a wind speed prevailing at the first geographic location is sensed or sampled at 71. Respective signals representing the wind direction and the wind speed are generated. These respective signals representing the wind direction and the wind speed are transmitted at 72 and received at 73. A wind speed icon signal representing a wind speed icon corresponding to the wind speed signal is generated at 74, along with a wind direction icon signal representing a wind direction icon corresponding to the wind direction signal. An input television signal representing the television broadcast related to the first geographic location is received at 75. The input television signal is merged with the wind speed icon signal and the wind direction icon signal at 76 so that the wind speed icon and the wind direction icon are superimposed on the television broadcast related to the first geographic location.

A8 cont'd

In an illustrative embodiment of the invention, the

method further comprises the following steps involved with operating at least a second monitoring station within the system. A further wind direction and a further wind speed prevailing are sensed at a further geographic location (at 71). Further respective signals representing the further wind direction and the further wind speed are generated, and these further respective signals representing the further wind direction and the further wind speed are transmitted to the base station (at 72). These further respective signals representing the further wind direction and the further wind speed are received at the base station (at 73). The base station generates (at 74) a further wind speed icon signal representing a further wind speed icon corresponding to the further wind speed signal, and a further wind direction icon signal representing a further wind direction icon corresponding to the further wind direction signal. The base [[bases]] station also receives (at 75) a further input television signal representing a further television broadcast related to a further geographic location. Finally, the base station merges (at 76) the further input television signal with the further wind speed icon signal and the further wind direction icon signal so that the further wind speed icon and the further wind direction icon are superimposed on the further television broadcast related to the further geographic location.

A8 cont'd

A test is performed at 77 to determine whether additional monitoring stations are to be sampled. If so, another monitoring station, in this illustrative embodiment, the second

monitoring station, is sampled at 78 and the previously described steps (72, 73, 74, 75, 76) are repeated. If not, further samplings are taken from the first monitoring station and the previously described steps (72, 73, 74, 75, 76) are repeated.

A8 cancel.

It is understood that changes may be made to the illustrative embodiments described above without departing from the broad inventive concepts thereof. ~~For example, XXX.~~ Accordingly, the present invention is not limited to the particular illustrative embodiments disclosed, but is intended to cover all modifications that are within the spirit and scope of the invention as defined by the appended claims.

Please replace the paragraph at page 21, lines 2 to 19 (the "Abstract"), with the following amended paragraph:

A9 cont'd

A system and method are provided for integrating data representing at least one weather parameter prevailing at at least a first geographic location into a television broadcast related to the first geographic location. ~~The system includes at least one monitoring station located at the first geographic location, with the monitoring station including apparatus for sensing the weather parameter. The sensing apparatus is adapted to generate a weather parameter signal representing the weather parameter. The monitoring station also includes apparatus for transmitting the weather parameter signal from the monitoring station. The system also includes a base station that further~~

~~includes apparatus for receiving the weather parameter signal from the monitoring station. This receiving apparatus provides the weather parameter signal to rest of the base station. Apparatus, coupled to receive the weather parameter signal from the receiving apparatus, are provided for generating an~~ An icon signal representing a weather parameter icon is generated in response to the weather parameter, and ~~signal. The weather parameter icon~~ represents the weather parameter sensed at the first geographic location. Apparatus is provided for receiving ~~an input television signal representing~~ the television broadcast related to the first geographic location, and [[.]] ~~These receiving apparatus provide the input television signal to the base station. Finally, apparatus is provided~~ for merging the ~~input~~ television broadcast signal with the icon signal, ~~with the merging apparatus~~ producing an output television signal representing the weather parameter icon superimposed on the ~~input~~ television broadcast ~~signal~~.

A9 cancl.